REMARKS/ARGUMENTS

Claims 1, 3-9, and 11-20 were previously pending in the application. New claims 21-22 are added herein. Assuming the entry of this amendment, claims 1, 3-9, 11-22 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

On page 2 of the office action, the Examiner rejected claims 1 and 9 under 35 U.S.C. 103(a) as being unpatentable over Andersson in view of Corbett. On page 2, the Examiner rejected claims 3-8 and 11-20 under 35 U.S.C. 103(a) as being unpatentable over Andersson in view of Corbett and Toskala. For the following reasons, the Applicant submits that all of the now-pending claims are allowable over the cited references.

Claim 1 is directed to a method for use in wireless equipment. According to claim 1, the wireless equipment receives user channel transmit power information from base stations involved in a soft handoff with user equipment. The wireless equipment also receives information from the user equipment, where the information received from the user equipment comprises a value representative of an excess signal-to-noise ratio (SNR) determined by the user equipment as the amount by which an SNR value of one or more user channel signals received at the user equipment exceeds a target SNR value. The wireless equipment determines a reference user transmit power level for use by the base stations as a function of the received user channel transmit power information and the received information from the user equipment. In rejecting claim 1, the Examiner cited a combination of teachings in Andersson and Corbett.

According to the Examiner's first statement, Andersson teaches "a method for use in wireless equipment, including receiving user channel transmit power information from base stations involved in a soft handoff with user equipment," citing column 1, lines 54-58, and column 8, lines 22-37. The teachings at column 1, lines 54-58, relate to soft diversity handover, where two or more base stations simultaneously communicate with a single mobile station. The teachings at column 8, lines 54-58, relate to the mobile station detecting the signal strengths of the signals received from the base stations. According to these teachings and the Examiner's first statement, the "wireless equipment" recited in claim 1 would be Andersson's mobile station, which would also be the "user equipment" of claim 1.

According to the Examiner's second statement, Andersson also teaches:

> receiving information from the user equipment, the information received from the user equipment comprises a value representative of difference in a signal quality parameter determined by the user equipment as the amount by which a signal quality parameter of one or more user channel signals received at the user equipment differs from a target signal quality parameter, wherein the wireless equipment determines a transmit power level for use by the base stations as a function of the received user channel transmit power information and the received information from the user equipment,

citing column 8, lines 60-67, and column 9, lines 1-10. There is no way to reconcile this second statement of the Examiner with his previous, first statement.

As described above, in the first statement, Andersson's mobile station would be both the "wireless equipment" and the "user equipment" of claim 1. In the second statement, the wireless equipment receives information from the user equipment. If, according to the Examiner's first statement, Andersson's mobile station is both the "wireless equipment" and the "user equipment" of claim 1, then it

does not make any sense to have the wireless equipment receive information from the user equipment, as implied by the Examiner's second statement and as explicitly recited in claim 1.

Furthermore, the teachings cited in the second statement relate to the power control routine of Andersson's Fig. 4, which is "used to control the transmit power level in any direction, e.g., uplink and downlink." In particular, for uplink (i.e., from base station to mobile station) transmit power level control, the processing of Fig. 4 would be implemented in the mobile station. On the other hand, for downlink (i.e., from mobile station to base station) transmit power level control, the processing of Fig. 4 would be implemented in the base station.

If the second statement is assumed to relate to uplink transmit power level control, then Andersson's base station would be the "user equipment" of claim 1, and Andersson's mobile station would be the "wireless equipment" of claim 1. In that case, the second statement contradicts the first statement, which implies that Andersson's mobile station is the "user equipment" of claim 1.

On the other hand, if the second statement is assumed to relate to downlink transmit power level control, then Andersson's mobile station would be the "user equipment" of claim 1, and Andersson's base station would be the "wireless equipment" of claim 1. In that case, the second statement still contradicts the first statement, which implies that Andersson's mobile station is the "wireless equipment" of claim 1.

The fact that the Examiner's first and second statements cannot be reconciled without contradiction is sufficient to conclude that the rejection of claim 1 is improper. Nevertheless, there are additional reasons for reaching that same conclusion.

The Examiner admitted that "Andersson does not specifically teach a signal quality parameter that is an excess signal-to-noise ratio value or determining a reference user transmit power level." The Examiner cited Corbett as providing the teachings missing from Andersson.

In particular, according to the Examiner's third statement, Corbett teaches "a signal quality parameter that is an increased signal-to-noise ratio value," citing column 2, lines 1-2. At column 2, lines 1-2, Corbett teaches that one of the advantages of diversity handover is "increased gain in downlink signal-to-noise ratio." While this cited passage does mention the term "signal-to-noise ratio," this is hardly a teaching of the "excess signal-to-noise ratio" missing from the teachings of Andersson. According to claim 1, the excess signal-to-noise ratio (SNR) is "the amount by which a signal-to-noise ratio value of one or more user channel signals received at the user equipment exceeds a target signal-to-noise ratio value." Corbett's "signal-to-noise ratio" is simply not an example of the "excess signal-to-noise ratio" of claim 1 as that term is explicitly defined.

Moreover, according to claim 1, the excess SNR is "determined by the user equipment," and the wireless equipment receives information comprising a value representative of the excess SNR. There is no teaching or even suggestion in Corbett that a value representative of excess SNR is received at wireless equipment, where the excess SNR was determined at user equipment, no matter how the terms "wireless equipment" and "user equipment" are interpreted. This provides another reason that the rejection of claim 1 is improper.

According to the Examiner's fourth statement, Corbett teaches "wireless equipment determining a reference user transmit power level," citing column 3, lines 23-26. The teachings of this cited passage refer to the slow power control loop implemented between two or more base stations and a radio network controller (RNC). See, e.g., column 6, lines 22-67. In this case, Corbett's RNC would be the "wireless equipment" recited in claim 1. As such, the Examiner's fourth statement contradicts each of his previous

three statements, where either Andersson's base station or mobile station, but not Andersson's RNC would be the "wireless equipment" recited in claim 1. This provides still another reason that the rejection of claim 1 is improper.

The Examiner's rejection of claim 1 is improper for yet another reason: there is no suggestion in the prior art to combine the cited teachings of Andersson and Corbett. Andersson and Corbett, which have a common assignee, describe different features of similar wireless systems. (Note that many of the figures and much of text of the two references are very similar and even identical.) Each of the wireless systems described by these two references has two power control loops: a fast, inner power control loop (typically involving the base stations and the mobile station, but not the RNC) and a slow, outer power control loop (involving the base stations and the RNC, but not the mobile station). See, e.g., Andersson, column 8, lines 38-59, and Corbett, column 6, lines 22-48.

Significantly, however, the teachings in Andersson cited by the Examiner to reject claim 1 relate to the fast, inner power control loop, while the teachings in Corbett cited by the Examiner to reject claim 1 relate to the slow, outer power control loop. There is simply no motivation for someone to modify Andersson's fast, inner power control loop to include features of Corbett's slow, outer power control loop. Since Andersson's fast, inner power control loop executes about 1,600 times a second (see Andersson, column 8, line 53) and Corbett's slow, outer power control loop executes once every 2-3 seconds (see Corbett, column 8, line 49), implementing features of Corbett's slow, outer power control loop in Andersson's fast, inner power control loop would greatly and disadvantageously increase the processing load in Andersson's system. In fact, the whole point of Corbett's slow, outer power control loop is to periodically and efficiently adjust the processing of the fast, inner power control loop to combat (relatively slow) base station power drift. See Corbett, Abstract and Figs. 4A-B, 9A-B, and 11A-B.

For all these reasons, the Applicant submits that independent claim 1 is allowable over the cited references. For similar reasons, the Applicant submits that independent claims 4, 6, 9, 12, 14, and 17 are allowable over the cited references. Since the rest of the claims depend variously from these independent claims, it is further submitted that those claims are also allowable over the cited references.

New Claims 21-22

According to new claim 21, the base stations use the reference user transmit power level during a fast power control loop, the user equipment determines the reference user transmit power level in a slow control loop, and the fast power control loop is implemented multiple times for each implementation of the slow control loop. These features emphasize the differences between the teachings of Andersson, which are related to a fast power control loop, and the invention of claim 21. The Applicant submits that this provides additional reasons for the allowability of claim 21 over the cited references.

The Applicant submits that there are similar additional reasons for the allowability of claim 22 over the cited references.

In view of the foregoing, the Applicant submits therefore that the rejections of claims under Section 103(a) have been overcome.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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